

**REMARKS**

Claims 1, 3, 5 through 20, 22, 24, and 25 were presented for examination in the present application. The instant amendment cancels claim 1 without prejudice and adds new claim 26. Thus, claims 3, 5 through 20, 22, and 24 through 26 are presented for consideration upon entry of the instant amendment.

Claims 1, 3, 5 through 11, 13, 15, 17, 22, 24, and 25 were rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/41310 ("the '310 patent"). Claims 12, 14, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over the '310 patent. Claims 16, 19, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over the '310 patent, and further in view of EP 773257 ("the '257 patent").

Claim 1 has been cancelled thus nullifying the rejection to claim 1. Reconsideration and withdrawal of the rejection to claim 1 are respectfully requested.

Claims 3, 5 through 11, 13, 15, 17, 22, 24, and 25 have been amended to depend from independent claim 20.

Independent claim 20 recites an object shrink that is wrapped with a shrink film comprising a polyethylene film of thickness 5 to 500  $\mu\text{m}$ . The polyethylene comprises an ethylene homopolymer-copolymer mixture having an ethylene homopolymer component and an ethylene copolymer component. The ethylene homopolymer-copolymer mixture has a molecular weight distribution in the range 5 to 40 and a weight average molecular weight of at least 100 kD. Further, the ethylene homopolymer component has a density of 960 to 980  $\text{kg/m}^3$ .

Independent claim 19 recites a process for wrapping an object comprising applying a shrink film about said object and shrinking said film by the application of heat thereto. The film is a shrink film comprising a polyethylene film of thickness 5 to 500  $\mu\text{m}$ . The polyethylene comprises an ethylene homopolymer-copolymer mixture having

an ethylene homopolymer component and a ethylene copolymer component. The ethylene homopolymer-copolymer mixture has a molecular weight distribution in the range 5 to 40 and a weight average molecular weight of at least 100 kD. Further, the ethylene homopolymer component has a density of 960 to 980 kg/m<sup>3</sup>.

The Office Action asserts that although "WO '310 does not specifically recommend a specific range of thicknesses for the disclosed films... the claimed range is within the range of thickness commonly known and used in the art, and therefore one of ordinary skill would be motivated to use such conventional film thicknesses. Support for this assertion may be found in EP '257". See, pg. 4, para. 5.

The Office Action then asserts that "Regarding claims 19 and 20, the similar films of WO '310 use substantially the same extrusion blowing process as that used to make the specifically recited shrink films of EP '257, and therefore one of ordinary skill in the art would conclude that the films of WO '310 would be useful as a shrink wrapping film... [thus] said skilled worker would be motivated to employ the films of WO '310 as a shrink wrapping material". See, pgs 4 – 5, para. 5. Applicants respectfully disagree.

The '310 patent does not mention shrink films and there is no appreciation that a homopolymer copolymer blend could be used successfully in the manufacture of a shrink film. As such, the '310 patent certainly does not lead one of ordinary skill in the art toward the subject matter disclosed in claims 19 and 20.

The '257 patent does not teach the use of an ethylene homopolymer copolymer blend but rather the use of an in situ blend of copolymers. The polymer composition used to make the shrink films in the '257 patent is, therefore, rather different from that recited in claims 19 and 20. There is no evidence, whatsoever, that the conditions required to make a shrink film out of a blend of copolymers are the same as the conditions required to make a shrink film out of a blend of a homopolymer and copolymer.

The use of a blend of homopolymer and copolymer components provides a better balance of stiffness and mechanical properties (the stiffness increases whilst the dart drop and tear strength remain the same). The properties therefore of a blend of homopolymer and copolymer are somewhat different than the properties of a blend of two copolymers. In general, the density of the copolymer blend will be lower. Also, in general, the copolymer blend will have a higher molecular weight and lower melt flow rate. There is simply no evidence that the conditions required to make shrink films from rather different polymers are the same.

Note also that the film blowing conditions in the '257 patent are not the same as those used in the examples of the present application. The present application teaches a frost line height of 900 mm in the examples. In the '257 patent, the frost line height suggested is 12 inches (corresponding to 300 mm). The frost line height in the present application is therefore three times larger. See, para. 40 of the '257 patent. The die diameter suggested in the '257 patent is 75 mm (para 0040) which is less than half of the 200 mm mentioned in the examples of the present application. It is submitted, therefore, that the film blowing conditions in the '257 patent are sufficiently different from those used in the present application for there to be doubt as to whether the conditions of the '257 patent would give shrink films with the polymers of the present application.

In any event, Applicants respectfully submit that the proposed combination of the '310 patent and the '257 patent involves hindsight analysis. Let us remember that the document mainly relied upon by the Office Action and the document which is the starting point for the inventive step attack here is the '310 patent. The inventors of the '310 patent had no idea that the blend of a homopolymer and copolymer, which could be made by the process disclosed in the '310 patent, could also be made into a shrink film. As such, there is no reason why one of ordinary skill in the art would look to the invention disclosed in the '257 patent.

Using the '310 patent as a starting point, one of ordinary skill would not consider an unrelated counter for shrink films because the '310 patent does not mention shrink

films. The '257 patent polymers are different from those in the '310 patent insofar as the '257 patent describes a blend of copolymers and the '310 patent describes a homopolymer copolymer blend. Why then would a person having ordinary skill in the art look to a document that describes shrink films made from copolymer blends? The '310 patent requires the presence of a high density component which is absent from the '257 patent. The '257 patent does not consider the issues of down gauging. There is absolutely no reason, therefore, for one of ordinary skill to consider the '257 patent when practicing the invention of the '310 patent.

One aspect of the present invention provides multimodal shrink films with the non-obvious combination of a homopolymer and copolymer of ethylene as LMW/HMW components. This solution is not evident in light of prior art shrink film solutions such as LDPE shrink films, broad molecular weight distribution LLDPE shrink films and the bimodal copolymeric LLDPE of the '257 patent.

Applicants respectfully submit, therefore, that there is nothing obvious about realizing that a blend of homopolymer and copolymer can in fact be used to shrink wrap objects. The combination with the '257 patent is not a valid one and the '257 patent describes different polymer blends using different film blowing conditions.

As such, Applicants respectfully submit that claims 19 and 20 are in condition for allowance. Claims 3, 5 through 18, 22, 24, and 25 depend from independent claim 20 and are in condition for at least the reasons given above for claim 20. Reconsideration and withdrawal of the rejections to claims 3, 5 through 20, 22, 24, and 25 are respectfully requested.

Claim 26 has been added to point out various aspects of the present application. It is believed that new claim 26 is in condition for allowance for at least the reason that it depends from independent claim 20 which is now also in condition for allowance.

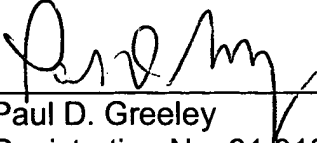
In view of the above, it is respectfully submitted that the present application is in

condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

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Paul D. Greeley  
Registration No. 31,019  
Attorney for Applicant(s)  
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.  
One Landmark Square, 10<sup>th</sup> floor  
Stamford, CT 06901-2682  
Tel: (203) 327-4500  
Fax: (203) 327-6401